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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/480,338	01/07/2000	Mariko Takahashi	1163-0260p	4203

7590 06/07/2004
Bich Stewart Kolasch & Birch LLP
P.O. Box 747
Falls Church, VA 22040-0747

EXAMINER

VIDA, MELANIE M

ART UNIT PAPER NUMBER

2626

DATE MAILED: 06/07/2004

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/480,338

Applicant(s)

TAKAHASHI ET AL.

Examiner

Melanie M Vida

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-36, 39 and 40 is/are allowed.
- 6) ☒ Claim(s) 1, 14, 29, 37 and 38 is/are rejected.
- 7) ☒ Claim(s) 3, 5-13, 15, 17-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This action is responsive to an amendment filed on 3/11/04. Claims 1-40 are pending. Claims 37-40 are newly added.

Response to Arguments

2. Applicant's arguments, see page 32, lines 20-23 and page 33-34, filed 3/11/04, with respect to claims 1 and 14 have been fully considered and are persuasive. Further, Applicant's arguments, see page 35, lines 18 through page 36, lines 17 have been considered and are persuasive. The rejection of 11/19/03 has been withdrawn.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claim 1, 2, 4, 14, 16, and 37-38** are rejected under 35 U.S.C. 102(b) as being anticipated by Hoshino, US-PAT-NO: 5,363,218, (hereinafter, Hoshino).

Regarding, **claim 1**, Hoshino, as shown in figures 19-20, teaches a color masking device, which reads on “a color gamut compression apparatus” for converting RGB color space for a CRT device, which reads on “for converting a source color generated by an information input

Art Unit: 2626

apparatus” to CMYK color space for printing using a printer, which reads on “into a target color inside a color gamut reproducible by an information-output apparatus, comprising”, (col. 5, lines 47-54; col. 18, lines 48-col. 19, lines 5). Hoshino inherently teaches “a point of convergence computation part” as evidenced by the convergence operation by mapping the colorimetric system shown in figure 5 onto a coordinate system shown in figure 4, (col. 9, lines 15-20). Furthermore, Hoshino describes in example 2, a straight line passing L^*T and rT on a section of the color gamut at a hue angle is used to move distance from the maximum chroma value of the color gamut of the printed matter on the straight line, the chroma value which is $2/3$ times of the maximum chroma value of the color gamut on the color CRT device, such that the hue angle is fixed, which reads on “for computing a point of convergence for a chromatic color such that the point of convergence has the same hue value as a hypothetical chromatic color that would be reproduced by the information-output apparatus based on a digital signal value for the information output apparatus corresponding to a color determined by the source color, and lies inside the color gamut of the information output apparatus”, (col. 11, lines 60 through col. 12, lines 4). The “first point of compression” is inherently taught as evidenced by figure 9, and 10, wherein the chroma is converted on the straight line to the color gamut of the printed matter on the straight line, which reads on “for computing a point of compression such that the point of compression lies on a substantially straight line connecting the point of convergence and the source color, and lies inside the color gamut of the information-output apparatus”, (col. 12, lines 35-43). The “compression part” is inherently evidenced by the hue angle is fixed while the chroma value moves from rT to rT' on the straight line is $b(rT - rT')$, which reads on “for

Art Unit: 2626

converting the source color into the target color corresponding to the point of compression computed by said first point of compression computation part”, (col. 12, lines 55-65).

Regarding, **claim 2**, Hoshino, as shown in figure 8 a point rTV_{maxT} ” located on a color gamut of color CRT is converted to a point rIN_{maxT} ”, a point on the color gamut of printed matter, along a straight line, which reads on “said first point of compression computation part computes the point of compression such that the point of compression is at an intersection of the substantially straight line and a boundary of the color gamut of information-output apparatus”, (see figure 8 and example 2, col. 11, lines 10-55).

Regarding, **claim 4**, Hoshino teaches, as shown in figure 8, a point L^*T ”, that has a constant hue value for the point rTV_{maxT} ” of the color gamut of color CRT and the point rIN_{maxT} ” of the color gamut of color CRT, which reads on “when a hue value of the source color matches that of any of a predetermined number of representative colors of the information output apparatus, said point of convergence computation part computes the point of convergence such that the point of convergence has the same hue as a hypothetical color reproduced by the information-output apparatus based on a digital signal value corresponding to the matched representative color, lies inside the color gamut of the information-output apparatus and is achromatic”, (see figure 8, and example 2, col. 11, lines 10-55). Hoshino teaches that when YMCK and RGB image data combination do not exist in a look up table (LUT), that an interpolation process point be calculated based on a weighted average of the YMCK apexes at the basic lattices containing RGB, which reads on “when the source color is intermediate adjacent representative color with respect to hue, the point of convergence is computed by linear

Art Unit: 2626

interpolation of points of convergence corresponding to adjacent representative colors”, (col. 17, lines 25-35).

Regarding, **claim 14**, please refer to the corresponding rejection in claim 1.

Regarding, **claim 16**, please refer to the corresponding rejection in claim 4.

Regarding, **claim 37**, Hoshino, as shown in figure 8, shows a point **rINmaxT**, which reads on “a point of compression” lies between point **L*T**, which reads on “a point of convergence” and **rTVmaxT**, which reads on “and the source color”, (see figure 8 and example 2, col. 11, lines 10-55).

Regarding, **claim 38**, please refer to the corresponding rejection in claim 37.

Allowable Subject Matter

5. **Claims 3, 5-13, 15, 17-20, 21-36, 39 and 40** are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Claim 21 is allowed because the point of convergence has the same mean value of the color gamut reproducible by the information-output apparatus, gravitational center value of the color gamut reproducible by the information-output apparatus, and median of the color gamut reproducible by the information-output apparatus and all the features recited, therein.

Claim 29 is allowed because of the same reasons as claim 21.

6. **Claim 3, 5-13, 15, 17-20** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. **Claims 3, 15** are allowed because of the point of

Art Unit: 2626

convergence computation execution determination part and the second point of compression computation part. **Claims 5-13, 17-20** are allowed because of the point of convergence computation part.

7. **Claims 22-28, and 39** are allowed for depending on allowable subject matter in claim 21, as stated above. **Claims 30-36, and 40** are allowed for depending on allowable subject matter in claim 29, as stated above.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie M Vida whose telephone number is (703) 306-4220. The examiner can normally be reached on 8:30 am 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly A Williams can be reached on (703) 305-4863. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Melanie M Vida
Examiner
Art Unit 2626

Application/Control Number: 09/480,338

Page 7

Art Unit: 2626

MMV

mmv

May 26, 2004

KAWilliams
KIMBERLY WILLIAMS
SUPERVISORY PATENT EXAMINER